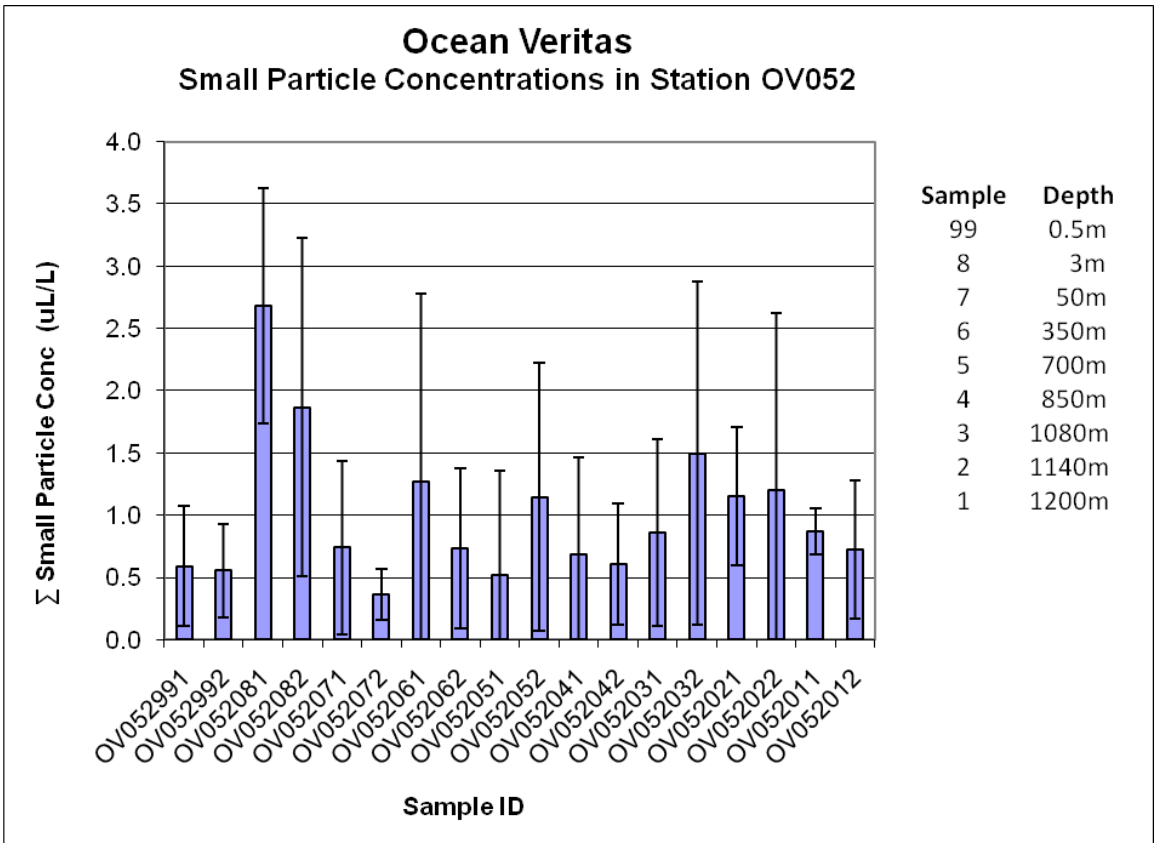
Daily Report: Tracking the Plume of Dispersed Oil using Particle Size Distribution Measurements

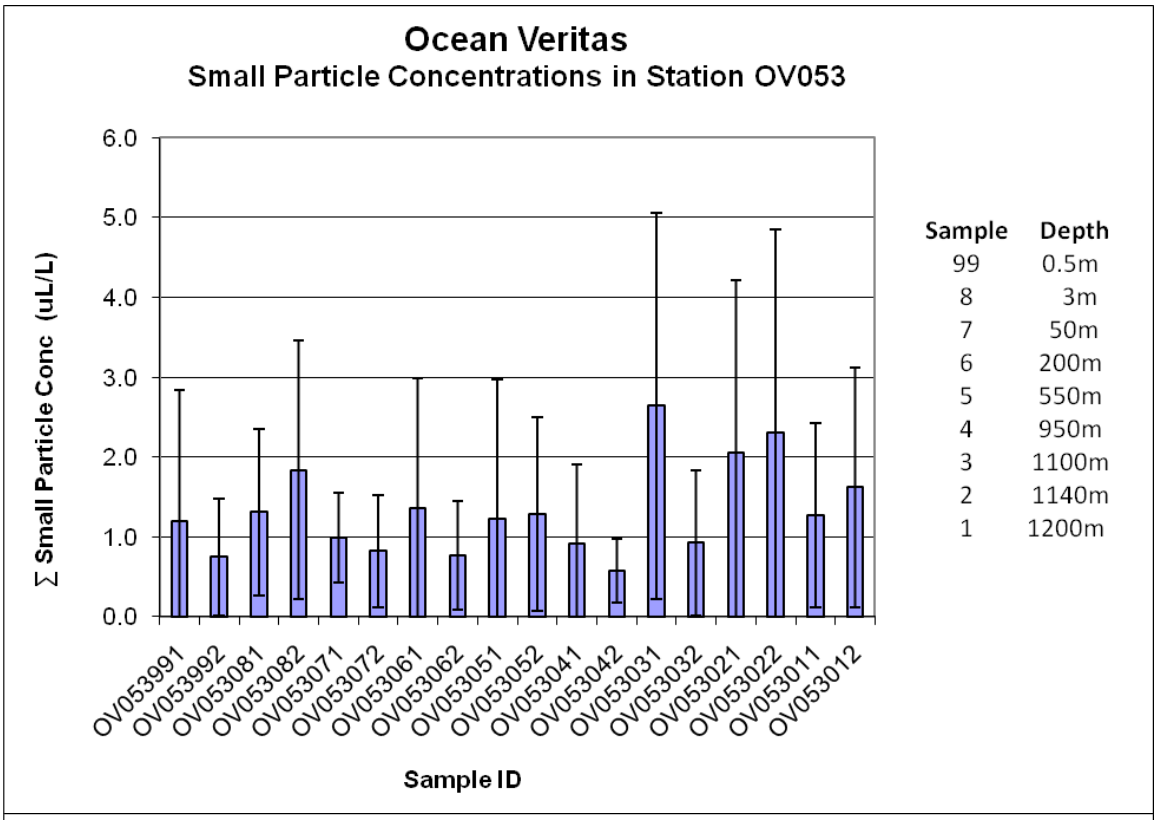
June 16, 2010

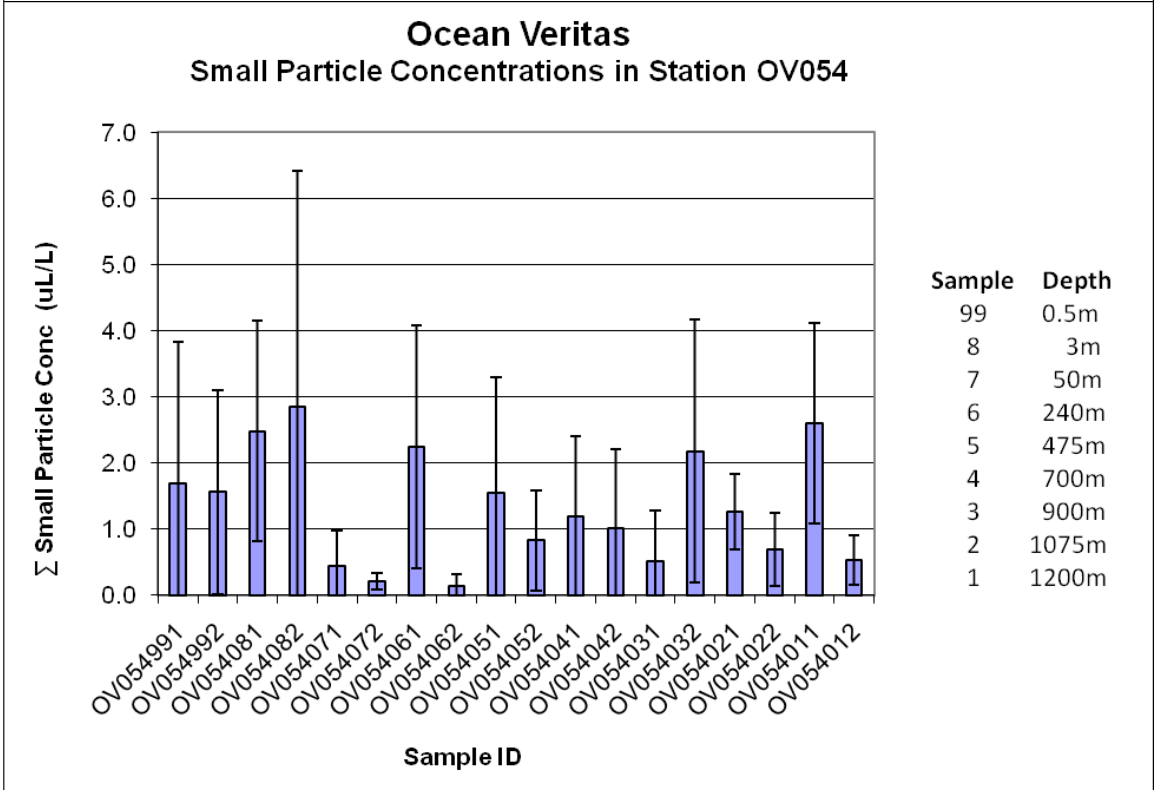
Water samples were collected at four stations for particle size distribution measurements using the LISST-100X particle counter. A total of 72 LISST samples were analyzed, including duplicates. Samples were also collected and stored for shore based fluorescence intensity ratio measurements.

Figure 1 presents the small droplet (∑ 2.5 - 60µm) particle size data for stations OV052 through OV055. LISST analysis and in-situ fluorometry detected a slightly increased small particle concentration in subsurface around 1000m depth in all stations. The LISST compliments the CTD fluorescence signal revealing a slight elevation of small particles at the depths of 900 to 1000m.

Station #	Lat	Long
OV052	28.754902	-88.291345
OV053	28.779023	-88.305090
OV054	28.798055	-88.330431
OV055	28.806069	-88.365333




Ocean Veritas
Small Particle Concentrations in Station OV053
∑ Small Particle Conc (uL/L)
6.0
5.0
4.0
3.0
2.0
1.0
0.0
OV053991
OV053992
OV053081
OV053082
OV053071
OV053072
OV053061
OV053062
OV053051
OV053052
OV053041
OV053042
OV053031
OV053032
OV053021
OV053022
OV053011
OV053012
Sample ID
Sample Depth
99 0.5m
8 3m
7 50m
6 200m
5 550m
4 950m
3 1100m
2 1140m
1 1200m


Ocean Veritas
Small Particle Concentrations in Station OV054
∑ Small Particle Conc (uL/L)
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
OV054991
OV054992
OV054081
OV054082
OV054071
OV054072
OV054061
OV054062
OV054051
OV054052
OV054041
OV054042
OV054031
OV054032
OV054021
OV054022
OV054011
OV054012
Sample ID
Sample Depth
99 0.5m
8 3m
7 50m
6 240m
5 475m
4 700m
3 900m
2 1075m
1 1200m

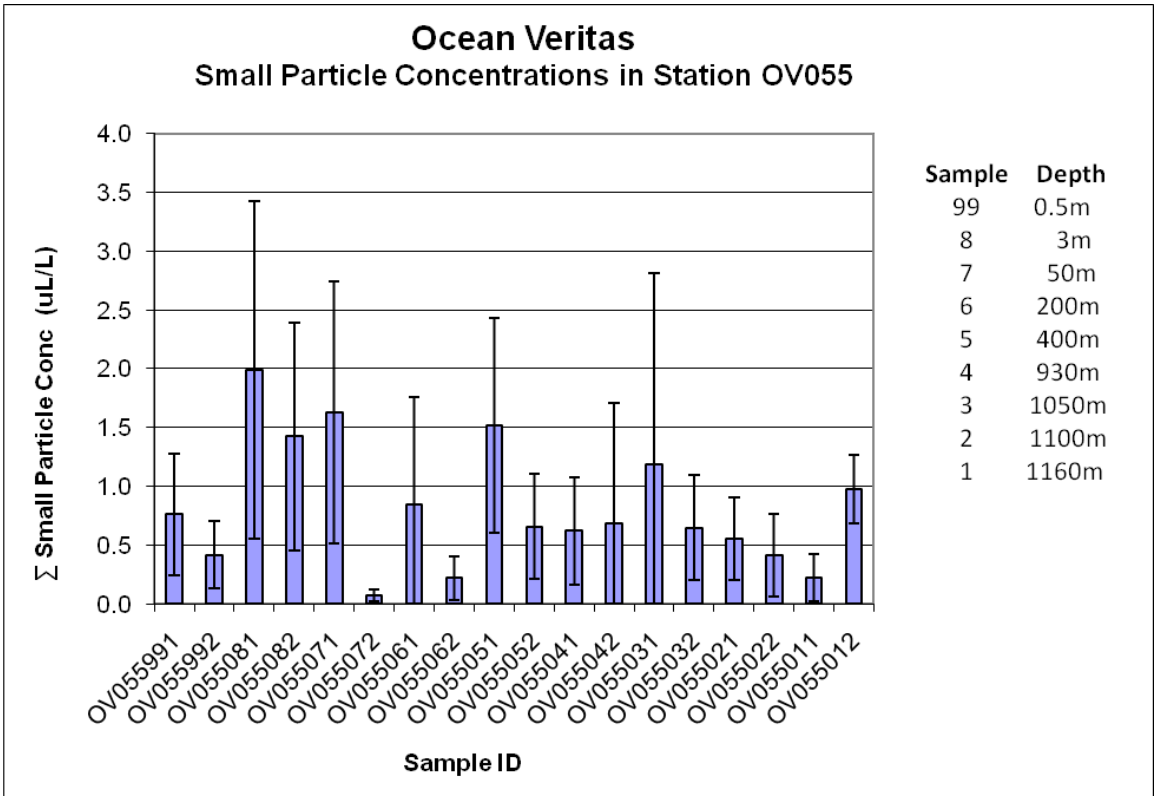


Figure 1: Average small particle concentrations as a function of depth from stations OV052 to OV055.